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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,124	09/25/2006	David Roxburgh	36-2015	8934
23117	7590	11/21/2007		
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER VU, BAI D	
			ART UNIT	PAPER NUMBER
			2165	
			MAIL DATE	DELIVERY MODE
			11/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,124	ROXBURGH ET AL.	
	Examiner	Art Unit	
	Bai D. Vu	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/20/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-15 are pending in this Office Action.

Oath/Declaration

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

Priority

3. As required by M.P.E.P. 201.14(c), acknowledgement is made of applicant's claim for priority based on foreign application 0407388.8 filed on March 31, 2004.

Drawings

4. A descriptive textual label for each numbered element in these figures would be needed to fully and better understand these figures without substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be shown in the drawing. Optionally, applicant may wish to include a table next to the present figure to fulfill this requirement. See 37 CFR 1.83. 37 CFR 1.84(n)(o) is recited below:

(n) Symbols. Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.

(o) Legends. Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office. They should contain as few words as possible."

The drawings are objected to because some elements or boxes in Figure 1 have no labeled. Thus, these elements do not give a viewer to fully understand without substantial analysis of detailed specification.

Claim Objections

5. Claims 1-6 and 8-12 are objected to because of the following informalities:

The phrase “; and, in response to” should be replaced by “; and in response to” in claim 1 line 10.

The recited limitation “A method” should be replaced by “The method” in claims 2-6.

The recited limitation “A client server system” should be replaced by “The client server system” in claim 8.

The recited limitation “A notification server” should be replaced by “The notification server” in claims 9 and 10.

The recited limitation “A server application” should be replaced by “The server application” in claim 11.

The recited limitation “A client application” should be replaced by “The client application” in claim 12.

Appropriate correction is required.

Specification

6. The abstract of the disclosure is objected to because it should be in narrative form within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

Claim 15 recites limitation "*computer readable media*". The specification fails to explicitly provide definitions and/or limitations for "*computer readable media*", thus insufficiently supports the claimed limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. **Claims 14 and 15** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per **claim 14** is a computer program claim; the claim lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they

fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

The claim should include "computer readable storage medium". In fact, claim 15 is not needed if claim 14 is amended to include the features of claim 15 in order to overcome the 101 rejection.

As per claim 15, recited "computer readable media", fails to place the invention squarely within one statutory class of invention. On paragraph [0036] of the instant

specification, applicant has provided evidence that applicant intends the "media" to include signals. As such, the claim drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim is not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. **Claims 1-3 and 6-15** are rejected under 35 U.S.C. 102(e) as being anticipated by Gupta et al. (US Pat No. 6,763,384 B1).

As per **claim 1**, Gupta et al. discloses "a method of providing digital services from a server application to a client application over an unsecure network in which the client application is able to initiate a secure client to server connection across the unsecure network in order to request a service or services and in order to receive

resulting output data from the server application," as the invention is for clients to register a set of events of interest and their identity with a server, such that when one such event occurs, the server causes a real-time connection over the network to transmit the event only to those interested clients (col. 2 lines 59-63) "the method including:"

"in response to the occurrence of an event detected by the server application at a time when there is no secure connection in place between the client application and the server application," as notifying the occurrence of an event to one or more client processes over a communication network (col. 2 lines 65-67); and the application servers 20-24 each run a plurality of processes with at least one process on each application server 20-24 generating messages that need to be transmitted in real-time to a plurality of end-users. Each application server 20-24 also maintains and updates a databank of the messages and a list of clients interested in these messages (col. 5 lines 22-27) wherein the client and /or end-user referred as client application "generating a notification identifying the server application and addressed to the client application; forwarding the notification to a notification server application;" as among the plurality of processes running on each application server 20-24 there is a message monitor that detects the occurrence of messages (i.e. "events"), captures these messages and sends them to the notification server 30 (col. 5 lines 31-34) "forwarding the notification from the notification server application to the client application; and," as once the notification server 30 has received messages and identified the intended recipients, it will generate notifications that are sent to the intended recipients that are currently on-

line (col. 6 lines 22-25) "in response to receipt of the notification, the client application initiating a secure connection across the unsecure network between the client application and the server application" as whether SOCKS or a reverse proxy is used, the client 11, 113, 117 within the firewall 210 is required to download a signed applet from the application server 20 that is generating notifications. The signed applet runs a server socket on a port. This server socket listens on the port and expects communication from the notification server 30 (col. 10 lines 25-30) referred as secure connection establishing for receiving notification from the notification server.

As per **claim 2**, Gupta et al. discloses "a method according to claim 1 in which the notification takes the form of a non-executable data file" as there are two types of databank maintained by the notification server 30. The first databank comprises a list of clients together with the messages of interest to those clients. Table 1 shows a hypothetical example of this type of databank (col. 6 lines 26-30) referred as text; and the second data-bank is a list of clients that are currently active. In this context "active" refers to the readiness of the client to receive notification messages. Table 2 shows a hypothetical example of this type of databank (col. 6 lines 36-39) referred as public key certificates.

As per **claim 3**, Gupta et al. discloses "a method according to claim 2 in which the notification takes the form of a simple text file containing an extensible Markup Language, XML, document" as in order to reduce the amount of data that needs to be

sent with each notification, the transmitted message need contain only the changed data, for example, the amount of the winning bid for an auction site. The client then dynamically generates a display incorporating the changed data for the user to view. An example of this is when data is sent in XML (eXtensible Markup Language). XML data contains only information regarding the content and structure of a message (col. 8 lines 58-66).

As per claim 6, Gupta et al. discloses "a method according to claim 1 wherein a single notification server receives notifications from plural server applications and forwards these to plural client applications" as FIG. 3 illustrates dataflow in an embodiment where a notification server serves multiple application servers and multiple clients (col. 4 lines 56-58); and FIG. 3 illustrates the flow of information that occurs when a message is generated. Whenever one of the application servers 20-24 generates an event for which notifications need to be sent to a client 114-118, a message monitor will inform the notification server 30. The notification server 30 determines the recipients for this notification, using the list of desired messages that the users have provided, together with the list of on-line clients 114-118. It then sends this notification using the server-initiated end-to-end message transfer mechanism to the receiving address identifier of the clients 114-118 (col. 8 lines 30-40).

As per claim 7, Gupta et al. discloses "a client server system comprising a client subsystem, a server subsystem and an interconnecting data network, the client

subsystem including a client application operable to initiate a secure connection over the interconnecting network with the server subsystem, the server subsystem comprising a server application, which is operable to co-operate with the client application to complete the setting up of a secure connection with the client application upon initiation of the connection by the client application and which is further operable to transmit output data over such a connection in response to requests for service provided by the client application,” as the invention is for clients to register a set of events of interest and their identity with a server, such that when one such event occurs, the server causes a real-time connection over the network to transmit the event only to those interested clients (col. 2 lines 59-63) wherein a server referred as a server application and a client referred as an client application “wherein the server subsystem further includes a notification server and wherein the server application is additionally operable to generate a notification, in response to detecting the occurrence of an event in the absence of a secure connection between the server application and the client application being currently established, and” as notifying the occurrence of an event to one or more client processes over a communication network (col. 2 lines 65-67); and the application servers 20-24 each run a plurality of processes with at least one process on each application server 20-24 generating messages that need to be transmitted in real-time to a plurality of end-users. Each application server 20-24 also maintains and updates a databank of the messages and a list of clients interested in these messages (col. 5 lines 22-27) wherein the client and /or end-user referred as client application “to transmit the notification to the notification server and” as among the plurality of

processes running on each application server 20-24 there is a message monitor that detects the occurrence of messages (i.e. "events"), captures these messages and sends them to the notification server 30 (col. 5 lines 31-34) "wherein the notification server is operable to forward the notification over the interconnecting network to the client application" as once the notification server 30 has received messages and identified the intended recipients, it will generate notifications that are sent to the intended recipients that are currently on-line (col. 6 lines 22-25); and whether SOCKS or a reverse proxy is used, the client 11, 113, 117 within the firewall 210 is required to download a signed applet from the application server 20 that is generating notifications. The signed applet runs a server socket on a port. This server socket listens on the port and expects communication from the notification server 30 (col. 10 lines 25-30) referred as secure connection establishing for receiving notification from the notification server.

As per claim 8, Gupta et al. discloses "a client server system according to claim 7 further comprising a backend subsystem which provides services to the server subsystem," as FIG. 2a illustrates schematically some of the software applications present within an end user's computer system 50. The software includes a web browser 100 which enables the end user to view web pages available on the Internet. The most commonly used browsers 100 are Microsoft Internet Explorer.TM. and Netscape Navigator.TM.. The end user's computer system 50 also includes a client process 110 which runs on behalf of the end user. The client process 110 notifies one or more of the application servers 20-24 of what messages the end user wishes to receive. The client

process 110 can dynamically update this list of desired messages according to the end user's preferences. The client process 110 may disconnect from the network 10 after sending this list of desired messages. When the client process 110 is ready to receive messages, it registers itself with the notification server 30. The registration information required by the notification server 30 will comprise the identity of the client process 110 together with a receiving address identifier. The receiving address identifier could, for example, include an IP (Internet Protocol) address and port number, together with the protocol to be used. The client process 110 needs to keep only its receiving address alive and may otherwise disconnect from the notification server 30. The client process 110 can be a mobile agent that is sent over the network 10 to the user's computer system 50. It can be automatically executed at the user's end within a web browser 100 whenever the user visits a page that refers to the mobile client. An example of such a client is an applet displayed within an HTML page. When the client is an applet, support for opening a socket is required. This is currently possible with a Java.TM. plug-in or by using Java version 1.2. Alternatively, the client process 110 is downloaded over the network 10 to the user's computer system 50 the first time the user enrolls for message notification. The downloaded client software is in the form of an application.

Subsequently, this application can get invoked from the user's computer system 50 either automatically at machine start-up or manually by the user. The application can also be configured as a plug-in to the web browser 100. In this case the plug-in is invoked when the user opens an appropriate web-page (col. 5 line 36 to col. 6 line 10) "wherein the server subsystem acts as a trusted intermediary between the client

subsystem and the backend subsystem” as Notification of Events The notification server 30 maintains and updates a databank of clients 110-118 that are on-line. On receiving a message from the message monitor, the notification server 30 determines the intended recipients of the message using the databank of messages that the clients 110-118 wish to receive. The notification server 30 may refer directly to the databank maintained by an application server 20-24, or it may maintain a local copy of the databanks maintained by the application servers 20-24. These copied databases may be maintained either within the main memory of the notification server 30, or in a separate database 42. Once the notification server 30 has received messages and identified the intended recipients, it will generate notifications that are sent to the intended recipients that are currently on-line (col. 6 lines 11-25).

As per **claim 9**, Gupta et al. discloses “a notification server for use in the system of claim 7 comprising means for receiving notifications from one or more server applications, means for processing the notifications to establish the destination address of the notifications and means for transmitting the notifications to respective client applications identified in the notifications” as notification server for notifying the occurrence of an event to one or more client processes over a communications network, the notification server comprising: a data store storing registration data from said client processes regarding events of interest to said client processes and, when said clients are currently active, their respective address identifiers; a processor linked to said data store, receiving notification of an event having occurred, and searching said

data store for those of the currently active client processes interested in said event; and network connection means, linked to said processor, whereby a notification of said event is output to be sent to said interested client processes (col. 4 lines 8-22).

As per **claim 10**, Gupta et al. discloses “a notification server for use in the system of claim 7 comprising a receiving module for receiving notifications from one or more server applications, a processor for processing the notifications to establish the destination address of the notifications and a transmitting module for transmitting the notifications to respective client applications identified in the notifications” as notification server for notifying the occurrence of an event to one or more client processes over a communications network, the notification server comprising: a data store storing registration data from said client processes regarding events of interest to said client processes and, when said clients are currently active, their respective address identifiers; a processor linked to said data store, receiving notification of an event having occurred, and searching said data store for those of the currently active client processes interested in said event; and network connection means, linked to said processor, whereby a notification of said event is output to be sent to said interested client processes (col. 4 lines 8-22) wherein the notification server referred as a receiving module.

As per **claim 11**, Gupta et al. discloses “a server application for use in the system of claim 7 comprising means for generating a notification, in response to

detecting the occurrence of an event in the absence of a secure connection between the server application and a client application being currently established, and for transmitting the notification to a notification server for onward forwarding of the notification to the client application" as notifying the occurrence of an event to one or more client processes over a communication network (col. 2 lines 65-67); the application servers 20-24 each run a plurality of processes with at least one process on each application server 20-24 generating messages that need to be transmitted in real-time to a plurality of end-users. Each application server 20-24 also maintains and updates a databank of the messages and a list of clients interested in these messages (col. 5 lines 22-27) wherein the client and /or end-user referred as client application; among the plurality of processes running on each application server 20-24 there is a message monitor that detects the occurrence of messages (i.e. "events"), captures these messages and sends them to the notification server 30 (col. 5 lines 31-34); once the notification server 30 has received messages and identified the intended recipients, it will generate notifications that are sent to the intended recipients that are currently on-line (col. 6 lines 22-25).

As per **claim 12**, Gupta et al. discloses "a client application for use in the system of claim 7 comprising a listener module for receiving notifications from a server application via a notification server and for causing the client application to respond to the notification by initiating a secure connection to the server application" as whether SOCKS or a reverse proxy is used, the client 11, 113, 117 within the firewall 210 is

required to download a signed applet from the application server 20 that is generating notifications. The signed applet runs a server socket on a port. This server socket listens on the port and expects communication from the notification server 30 (col. 10 lines 25-30) the server socket listening on the port referred as a listener module.

As per **claim 13**, Gupta et al. discloses "a client server system comprising a client subsystem, a server subsystem and an interconnecting data network, the client subsystem including a client application having means for initiating a secure connection over the interconnecting network with the server subsystem, the server subsystem comprising a server application, which has means for co-operating with the client application to complete the setting up of a secure connection with the client application upon initiation of the connection by the client application and means for transmitting output data over such a connection in response to requests for service provided by the client application," as the invention is for clients to register a set of events of interest and their identity with a server, such that when one such event occurs, the server causes a real-time connection over the network to transmit the event only to those interested clients (col. 2 lines 59-63) "wherein the server subsystem further includes a notification server and wherein the server application additionally includes means for generating a notification, in response to detecting the occurrence of an event in the absence of a secure connection between the server application and the client application being currently established, and" as notifying the occurrence of an event to one or more client processes over a communication network (col. 2 lines 65-67); and the application

servers 20-24 each run a plurality of processes with at least one process on each application server 20-24 generating messages that need to be transmitted in real-time to a plurality of end-users. Each application server 20-24 also maintains and updates a databank of the messages and a list of clients interested in these messages (col. 5 lines 22-27) wherein the client and /or end-user referred as client application "means for transmitting the notification to the notification server and" as among the plurality of processes running on each application server 20-24 there is a message monitor that detects the occurrence of messages (i.e. "events"), captures these messages and sends them to the notification server 30 (col. 5 lines 31-34) "wherein the notification server includes means for forwarding the notification over the interconnecting network to the client application" as once the notification server 30 has received messages and identified the intended recipients, it will generate notifications that are sent to the intended recipients that are currently on-line (col. 6 lines 22-25); and whether SOCKS or a reverse proxy is used, the client 11, 113, 117 within the firewall 210 is required to download a signed applet from the application server 20 that is generating notifications. The signed applet runs a server socket on a port. This server socket listens on the port and expects communication from the notification server 30 (col. 10 lines 25-30) referred as secure connection establishing for receiving notification from the notification server.

As per claim 14, Gupta et al. discloses "a computer program or suite of computer programs for controlling one or more computer processors to carry out the steps of claim 1 during execution of the computer program or suite of programs" as a computer

program product having a computer usable medium having a computer program embodied therein, for providing notification of the occurrence of an event over a network, said computer program product including: computer program code means for registering a set of events of interest to one or more clients and, when said one or more clients are ready to receive notification, registering their respective address identifiers with a server; computer program code means for detecting the occurrence of an event; computer program code means for identifying which of said clients are interested in notification of said event and are currently active; and computer program code means for causing a real-time connection over said network to transmit said notification to each identified client (col. 4 lines 24-42).

As per **claim 15**, Gupta et al. discloses "computer readable media carrying the computer program or suite of programs of claim 14" as the program may be supplied to the user encoded on a CD-ROM or a floppy disk (both generally depicted by the storage device 662), or alternatively could be read by the user from the network via a modem device connected to the computer 650. Still further, the computer system 600 can load the software from other computer readable media. This may include magnetic tape, a ROM or integrated circuit, a magneto-optical disk, a radio or infra-red transmission channel between the computer and another device, a computer readable card such as a PCMCIA card, and the Internet 620 and Intranets including email transmissions and information recorded on Internet sites and the like (col. 11 lines 52-63).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. in view of Nishizawa et al. (US Pat No. 6,081,906 A).

As per **claim 4**, Gupta et al. does not explicitly disclose "a method according to claim 1 further including running within the notification server application separate threads for controlling the forwarding of separate notifications to the client application". However, Nishizawa et al. discloses as FIG. 7 is a timing chart showing multi-thread RPC processing of the event notification. The processing shown in FIG. 7 is similar to that shown in FIG. 4, except that the notification client 50 is provided with a notification N.sub.i at the conclusion of the "SendEvent" processing. Two RPC servers 20 send the first and the second RPC requests PR1 and PR2 to the notification server 40. The first and second "SendEvent" requests PR1 and PR2 arrive at the notification server 40 simultaneously, or substantially simultaneously (T1). The response thread 25 loads the first and the second "SendEvent" requests PR1 and PR2 into the queue 21 and the database 22 and immediately returns the first and the second responses R1 and R2 to the respective RPC servers 20 (T1). Processing of the first and the second RPC requests PR1 and PR2 then proceeds in a parallel fashion using processing threads

24.sub.1 and 24.sub.2. Because the second process request PR2 is completed in a short time (T2), for example one second, the respective notification client 50 is notified of the event without any additional delay waiting for completion of processing the first request PR1. At the conclusion of processing of the first "SendEvent" request PR1 (T3), the notification N1 is forwarded to the respective notification client 50. Thus, the delay in notifying the notification clients 50 encountered when using a single -thread notification server is also eliminated (col. 5 lines 12-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Nishizawa et al. teaching of implementing the multi-thread processing with queuing into Gupta et al. system in order to achieve faster response time in sending notifications to clients.

14. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. in view of Osterman (US Pat No. 5,935,211 A).

As per **claim 5**, Gupta et al. does not explicitly disclose "a method according to claim 1 further including the server application specifying the number of times which the notification is to be retried in the event of failure to deliver the notification and further including the notification server retrying to deliver the notification up to the specified number of times in the event of failure to deliver the notification over the unsecure network". However, Osterman disclose as use of the time entries permits the server process to remove inactive processes from the distributed notification list. In particular,

the server process may remove from the list any entry for which a predetermined time period has expired since the entry was added to the list or since the time field of the entry was updated. For example, if low frequency polling is set to occur once every 10 minutes, then the server process might remove from the list any entries that have not been updated for twenty five minutes. The server process would remove entries from the list so that server resources would not be wasted in sending notifications to client processes that are no longer connected to the server process (col. 7 lines 43-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Osterman teaching of providing status information to the client processes into Gupta et al. system in order to provide a technique that permits client processes to reduce the frequency with which they poll the server processes. This, in turn, dramatically reduces the burden on the server process imposed by such polling (Osterman, col. 2 lines 51-54).

Conclusion

15. The following prior art made of record on form PTO-892 and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See **MPEP 707.059(c)**.

US-6,510,464 B1

US-6,546,432 B2

US-2003/0236924 A1

16. The examiner requests, in response to this Office Action, support is shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line number(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application.

17. When responding to this Office Action, applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

Contact Information

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bai D. Vu whose telephone number is 571-270-1751. The examiner can normally be reached on Mon - Fri 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11/09/2007

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